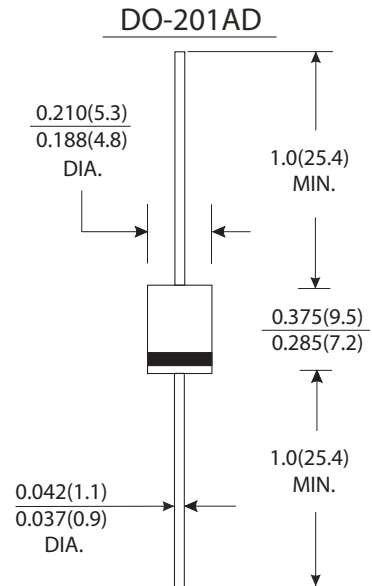


Features

- Plastic Package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, Low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed :
250 °C /10 seconds at terminals,
0.375" (9.5mm) lead length, 5lbs. (2.3Kg) tension

Mechanical Data

- Case : JEDEC DO-201AD molded plastic body
- Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.041 ounce, 1.15 gram



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

(Ratings at 25 °C ambient temperature unless otherwise specified, single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%)

	Symbols	SB320	SB330	SB340	SB350	SB360	SB380	SB3100	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	Volts
Maximum DC blocking Voltage	V_{DC}	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length(see Fig. 1)	$I_{(AV)}$	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	80.0							Amps
Maximum instantaneous forward voltage at 3.0A (Note 1)	V_F	0.55			0.58		0.85		Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	$T_A=25\text{ }^\circ\text{C}$	3.0							mA
	$T_A=100\text{ }^\circ\text{C}$	20			10				
Typical junction capacitance (Note 3)	C_J	250			160				pF
Typical thermal resistance (Note 2)	$R\theta_{JA}$	40.0							$^\circ\text{C}/\text{W}$
	$R\theta_{JL}$	10.0							
Operating junction temperature range	T_J	-55 to +125			-55 to +150				$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150							$^\circ\text{C}$

Notes:

- (1) Pulse test: 300 μS pulse width, 1% duty cycle
- (2) Thermal resistance from junction to lead vertical P.C.B. mounted, 0.5"(12.7mm) lead length with 2.5X2.5"(63.5X63.5mm) copper pads
- (3) Measured 1MHz and reverse voltage of 4.0 volts



RATINGS AND CHARACTERISTIC CURVES SB320 THRU SB3100

FIG.1-FORWARD CURRENT DERATING CURVE

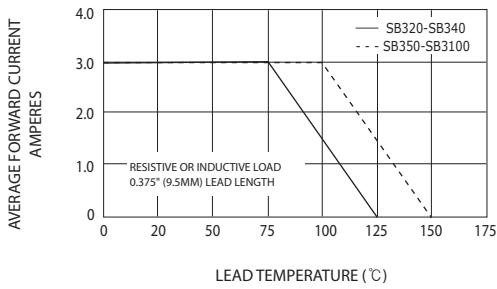


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

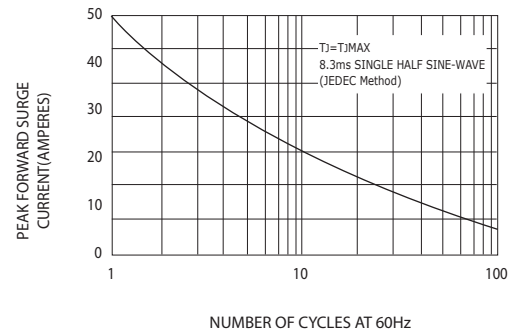


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

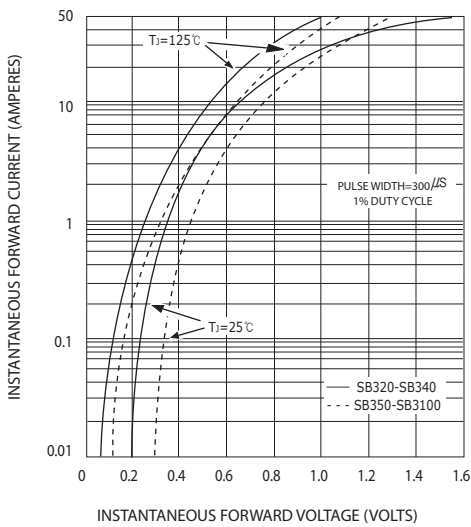


FIG.4-TYPICAL REVERSE CHARACTERISTICS

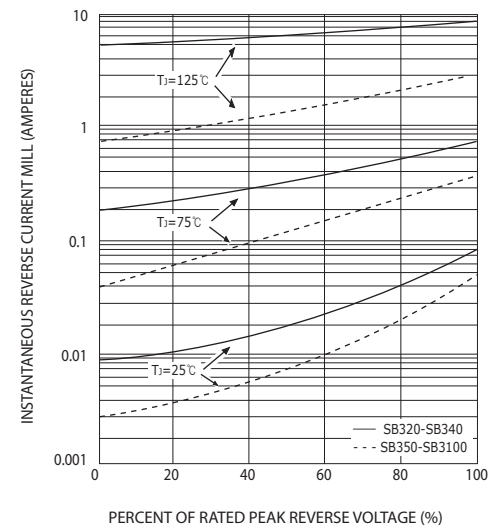


FIG.5-TYPICAL JUNCTION CAPACITANCE

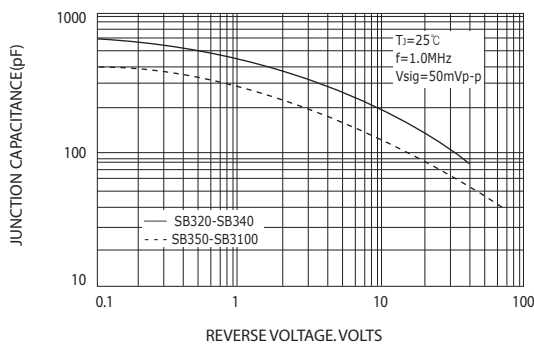


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

